

WE CLAIM:

1. A vehicle information system having a plurality of operative modules, said system comprising:

a control processing unit adapted to provide an interface among said plurality of operative modules, said operative modules include a display module adapted to provide visual information to the occupants of the vehicle, a navigation module adapted for global positioning satellite reception to provide vehicle position information to said control processing unit, a telecommunications module adapted for wireless communication to provide communication between said control processing unit and a wireless telecommunications network and between said control processing unit and any one of a plurality of local wireless devices, and a local network interface module adapted to provide communication between a vehicle control bus and said control processing unit; and

an antenna array including a GPS antenna mounted in an overhead console, said overhead console adapted to extend forward over the upper edge of the vehicle windshield such that said GPS antenna maintains line-of-sight with at least one global positioning satellite transmitter at all times.

2. A vehicle information system as set forth in claim 1 wherein said antenna array further includes a microwave antenna that operatively communicates with a cellular network using a standard cellular mobile communication format.

3. A vehicle information system as set forth in claim 1 wherein said antenna array further includes an antenna that operatively receives a standardized communications format to provide satellite radio reception.

4. A vehicle information system as set forth in claim 1 wherein said antenna array further includes an antenna that operatively receives a standardized communications format to provide television reception.

5. A vehicle information system as set forth in claim 1 wherein said system further includes:
a microphone system adapted to receive voice signals from vehicle occupants;
a speaker system adapted to generate audio signals from said control processing unit; and
an audio conversion module having a voice recognition circuit and a voice synthesizer circuit, said voice recognition circuit adapted to receive voice command from said microphone system, recognize particular predetermined voice commands as being one of a group of predetermined commands and to pass said recognized commands to said control processing unit, said voice synthesizing circuit adapted to process signals from said control processing unit and synthesize said signals into intelligible audio output signals and to pass said audio output signals to said speaker system.

6. A vehicle information system as set forth in claim 1 wherein said telecommunications module system further includes a short-range wireless RF transceiver module that operatively employs the Bluetooth standard telecommunication protocol.

7. A vehicle information system as set forth in claim 1 wherein said control processor unit further includes a memory module adapted to provide the necessary memory storage space for said control processing unit to operatively control the processes of said plurality of modules and to store a navigational database.

8. A vehicle information system as set forth in claim 7 wherein said navigational database may be stored in said memory module by downloading said navigation database from an outside source through a wireless telecommunication connection.

9. A vehicle information system as set forth in claim 7 wherein said memory module further includes a fixed portion and a removable portion, said removable portion adapted to be interchangeable with like removable portions so as to allow the use of different removable memory portions having different stored navigational databases, said removable memory portion further adapted to be interchangeable with like removable portions to allow a change in the size of the available memory.

10. A vehicle information system as set forth in claim 1 wherein said system further includes a keypad in operative communication with said control processor unit, said keypad adapted to allow a physical interface between vehicle occupants and said system.

11. A vehicle information system as set forth in claim 1 wherein said local network interface module further includes a local area network transceiver that operatively employs the CAN communication protocol.

12. A vehicle information system as set forth in claim 1 wherein said antenna array further includes a short-range wireless RF antenna that operatively employs the Bluetooth standard telecommunication protocol.

13. A vehicle information system as set forth in claim 1 wherein said display module is mounted in said overhead console and further includes a vacuum fluorescent display unit

14. A vehicle information system having a plurality of operative modules, said system comprising:

a control processing unit adapted to provide an interface among said plurality of operative modules, said operative modules include a vacuum fluorescent display module adapted to provide visual information to the occupants of the vehicle;

a keypad in operative communication with said control processor unit, said keypad adapted to allow a physical interface between vehicle occupants and said control processing unit;

a microphone system adapted to receive voice signals from vehicle occupants;

a speaker system adapted to generate audio signals from said control processing unit;

an audio conversion module having a voice recognition circuit and a voice synthesizer circuit, said voice recognition circuit adapted to receive voice commands from said microphone system, recognize particular predetermined voice commands as being one of a group of predetermined commands and to pass said recognized commands to said control processing unit, said voice synthesizing module adapted to process signals from said control processing unit and synthesize said signals into intelligible audio output signals and to pass said audio output signals to said speaker system;

a navigation module adapted for global positioning satellite reception and having a navigational database to provide vehicle position information and location specific information to the control unit;

a telecommunications module adapted for wireless communication to provide communication between said control processing unit and a wireless telecommunications network and between said control processing unit and any one of a plurality of local wireless devices;

a local network interface module adapted to provide communication between a vehicle control bus and the control unit; and

an antenna array including a GPS antenna mounted in an overhead console, said overhead console adapted to extend forward over the upper edge of the vehicle windshield such that GPS antenna maintains line-of-sight with at least one global positioning satellite transmitter at all times.

15. A vehicle information system as set forth in claim 1 wherein said antenna array further includes a microwave antenna that operatively communicates with a cellular network using a standard cellular mobile communication format.

16. A vehicle information system as set forth in claim 1 wherein said antenna array further includes an antenna that operatively receives a standardized communications format to provide satellite radio reception.

17. A vehicle information system as set forth in claim 1 wherein said antenna array further includes an antenna that operatively receives a standardized communications format to provide television reception.